FIG. 1

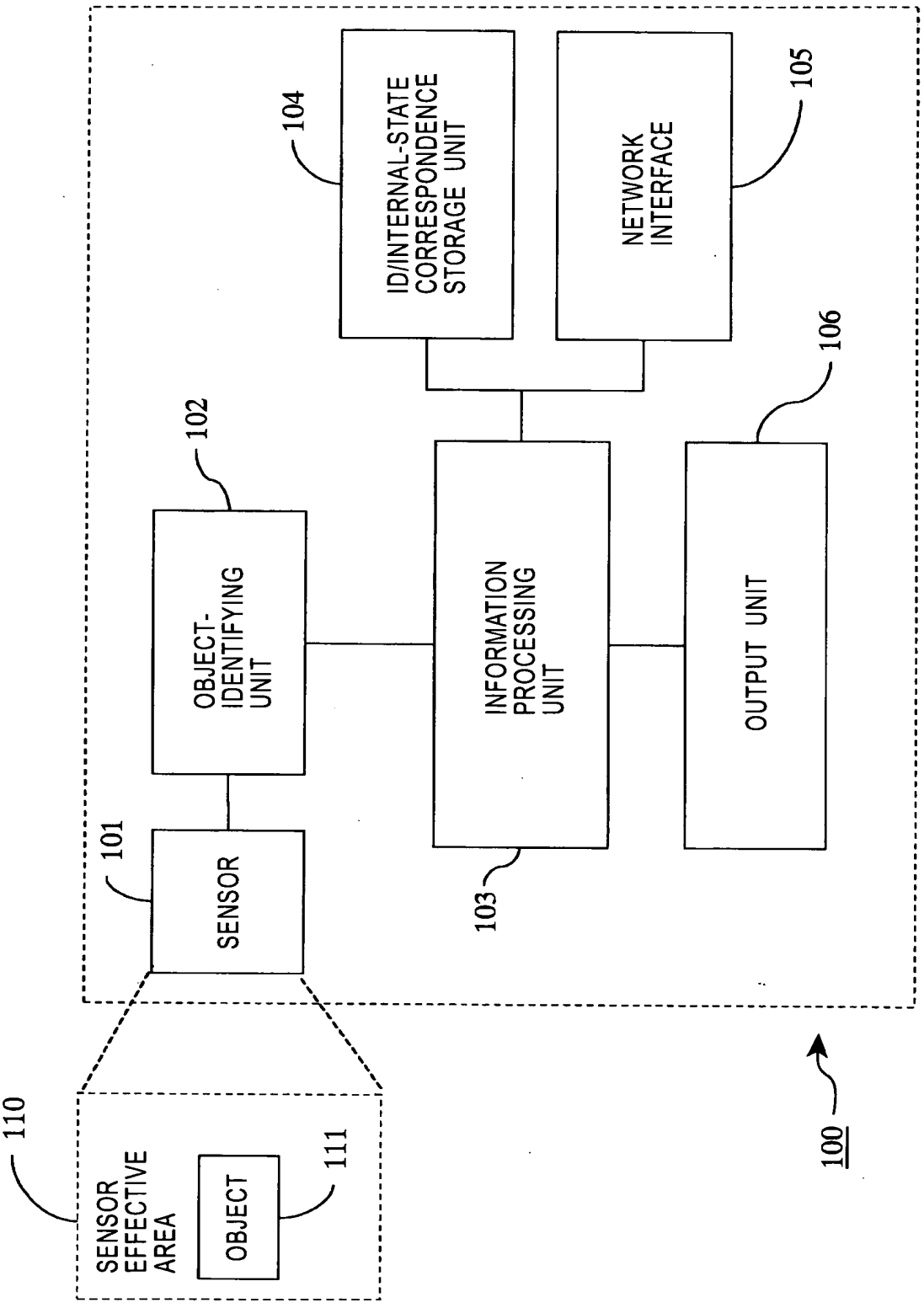

ID/INTERNAL-STATE CORRESPONDENCE STORAGE UNIT
104
NETWORK INTERFACE
105
106
OBJECT-IDENTIFYING UNIT
102
INFORMATION PROCESSING UNIT
OUTPUT UNIT
SENSOR
101
103
100
110
SENSOR EFFECTIVE AREA
OBJECT
111

FIG. 2

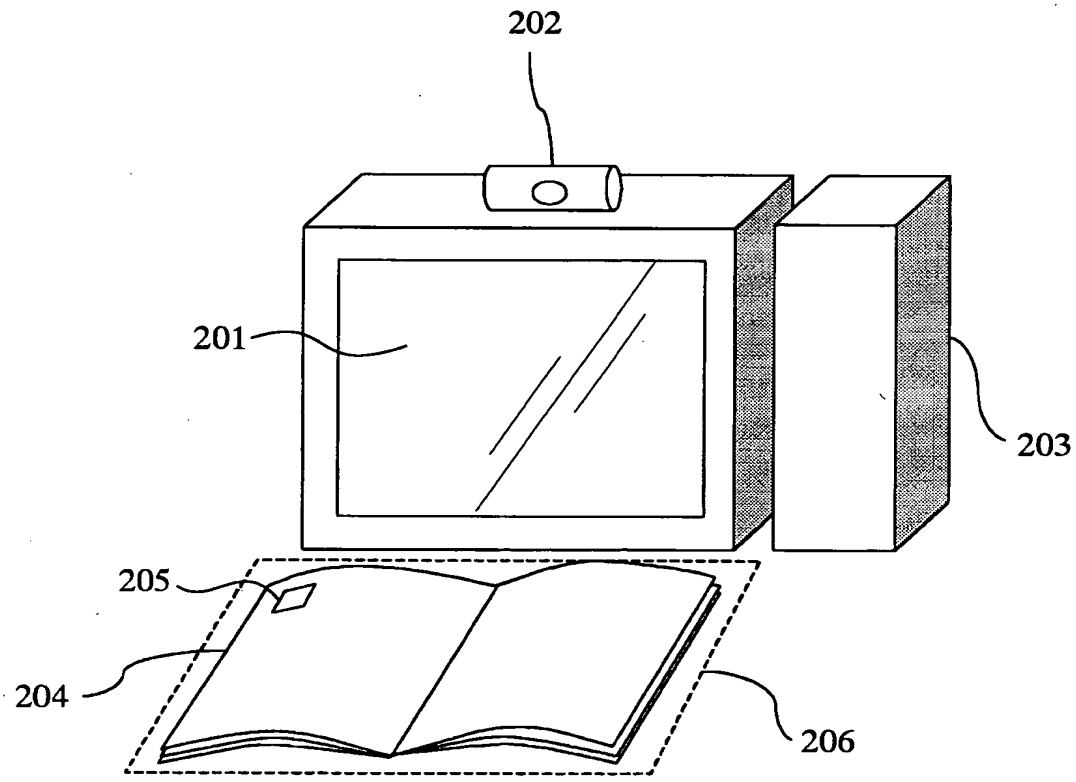


FIG. 3

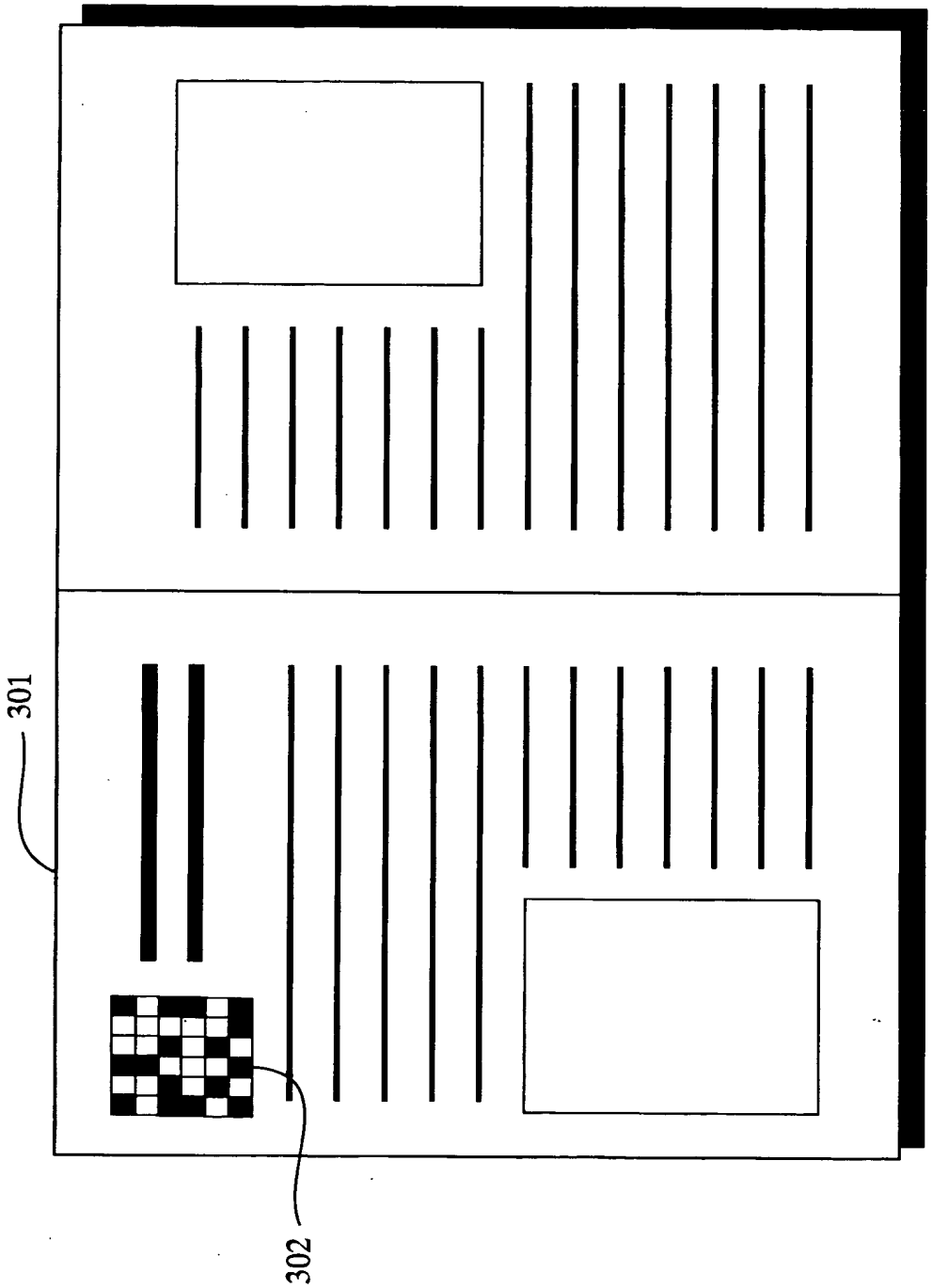


FIG. 4

ID	PATH OF EXECUTION FILE
001012	/usr/local/bin/game.exe
002031	/usr/bin/app.sh
032001	/mnt/hostA/bin/test.exe
...	...

FIG. 5

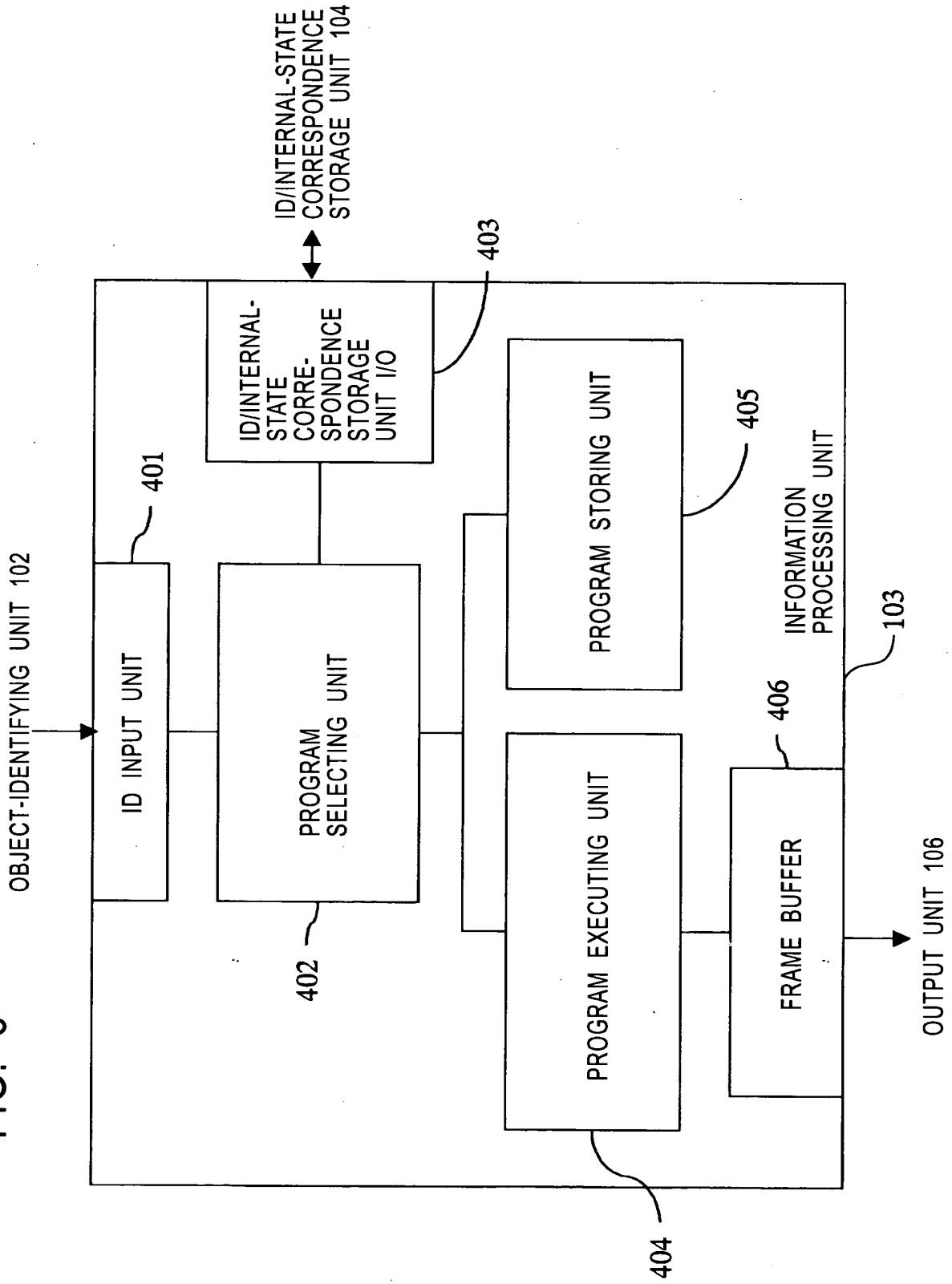

ID/INTERNAL-STATE CORRESPONDENCE STORAGE UNIT 104
403
ID/INTERNAL-STATE CORRE-SPONDENCE STORAGE UNIT I/O
401
OBJECT-IDENTIFYING UNIT 102
ID INPUT UNIT
PROGRAM SELECTING UNIT
402
PROGRAM STORING UNIT
405
INFORMATION PROCESSING UNIT
103
406
PROGRAM EXECUTING UNIT
FRAME BUFFER
OUTPUT UNIT 106
404

FIG. 6

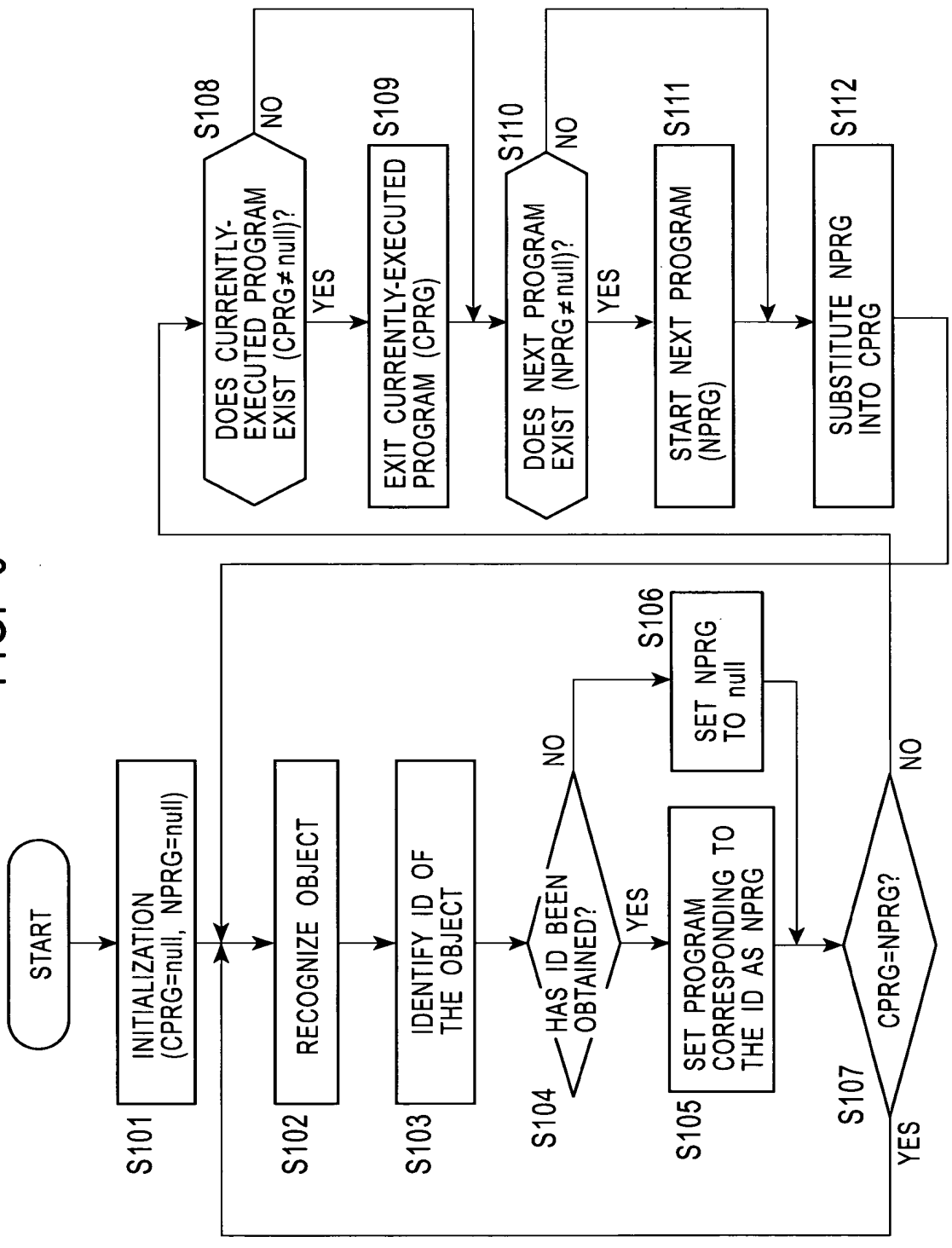

START
INITIALIZATION (CPRG=null, NPRG=null)
S101
RECOGNIZE OBJECT
S102
IDENTIFY ID OF THE OBJECT
S103
HAS ID BEEN OBTAINED?
S104
NO
YES
SET NPRG TO null
S106
SET PROGRAM CORRESPONDING TO THE ID AS NPRG
S105
CPRG=NPRG?
S107
NO
YES
DOES CURRENTLY-EXECUTED PROGRAM EXIST (CPRG≠null)?
S108
NO
YES
EXIT CURRENTLY-EXECUTED PROGRAM (CPRG)
S109
DOES NEXT PROGRAM EXIST (NPRG≠null)?
S110
NO
YES
START NEXT PROGRAM (NPRG)
S111
SUBSTITUTE NPRG INTO CPRG
S112

FIG. 7

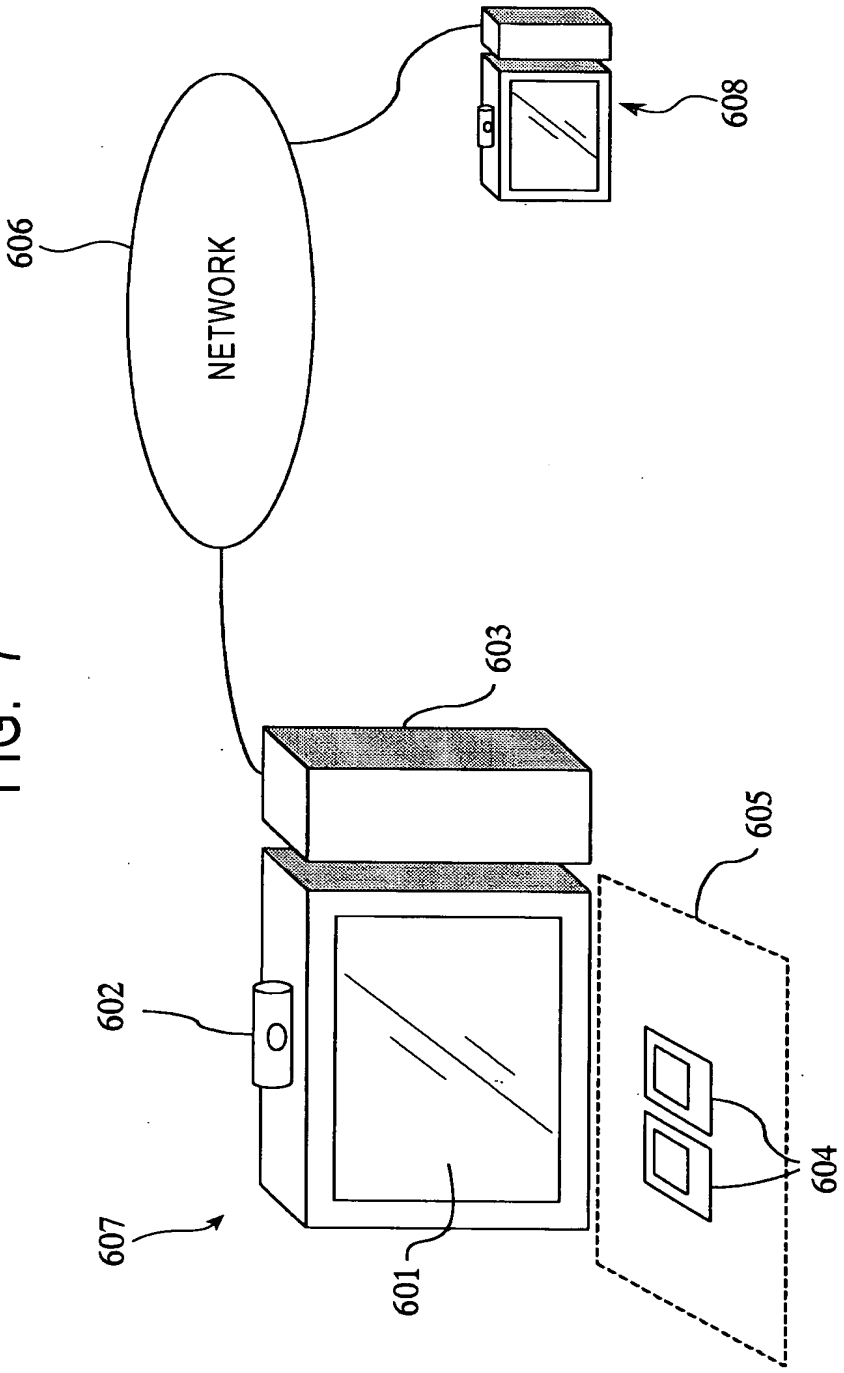


FIG. 8

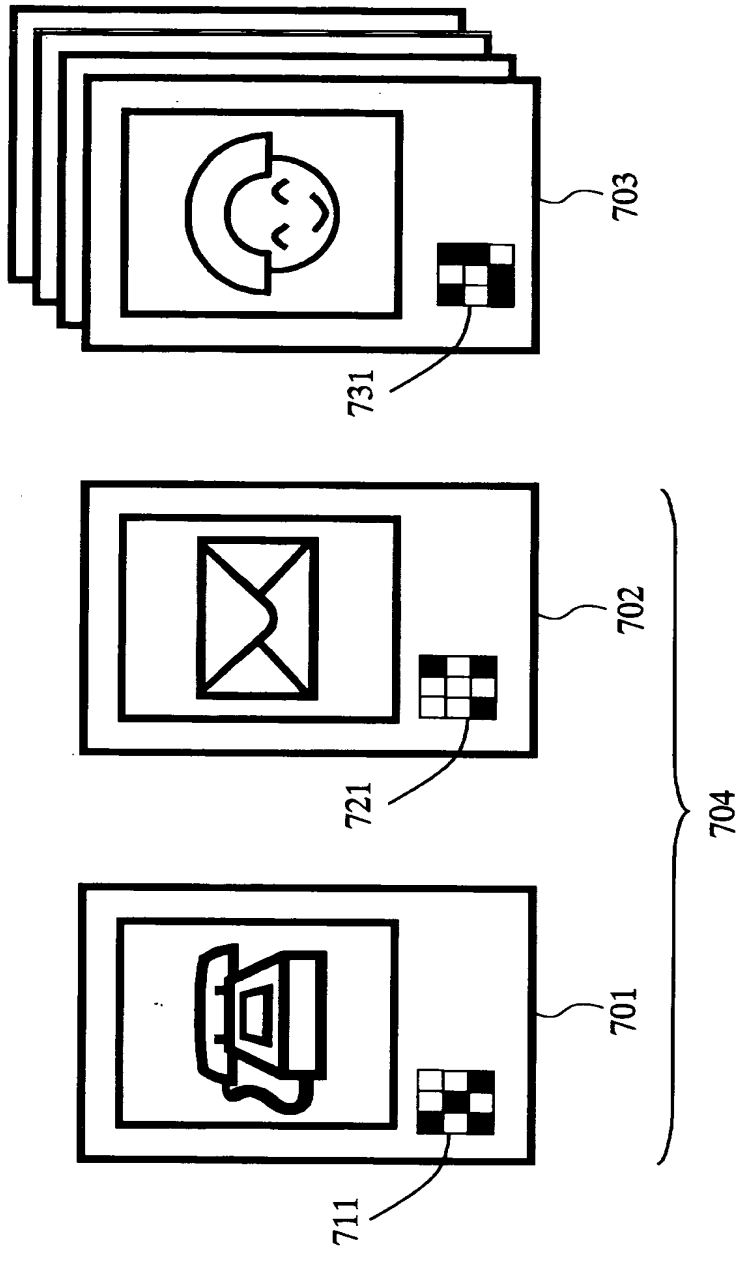


FIG. 9A

ID	CONNECTION PROTOCOL
1001027	mail
1023421	phone
1025773	video phone
1087321	text chat

FIG. 9B

ID	host name	user name
0100021	hostA	Alice
0100382	hostB	Bob
0100981	-----	Carol
...	...	...

FIG. 10

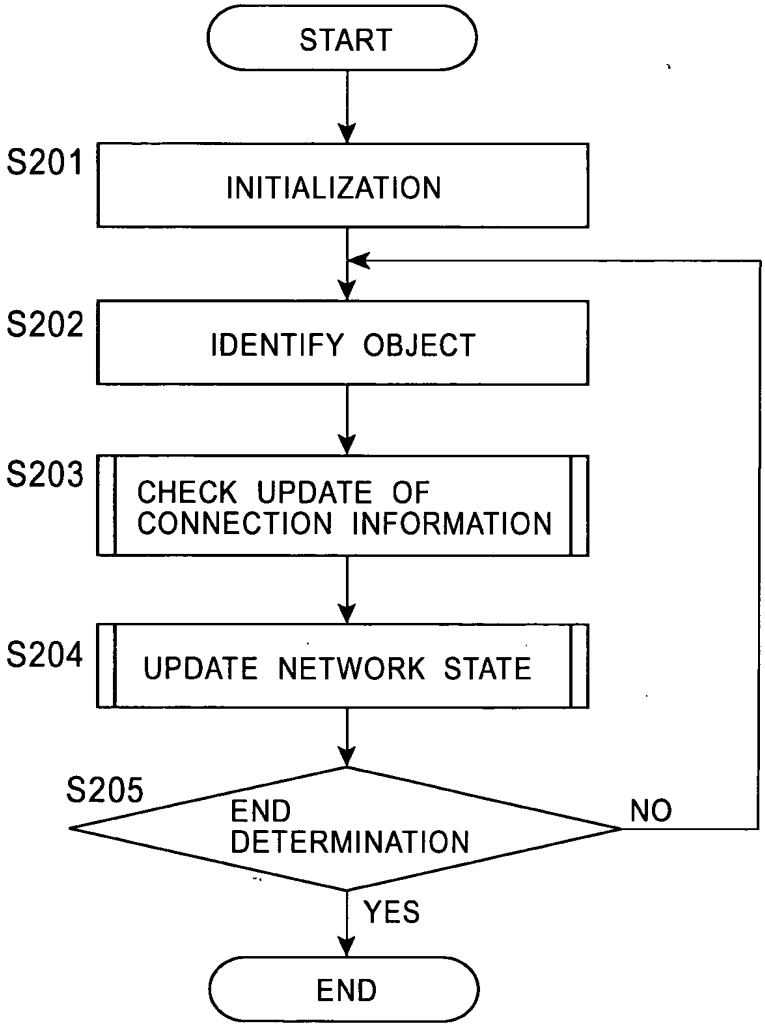

START
S201
INITIALIZATION
S202
IDENTIFY OBJECT
S203
CHECK UPDATE OF CONNECTION INFORMATION
S204
UPDATE NETWORK STATE
S205
END DETERMINATION
NO
YES
END

FIG. 11

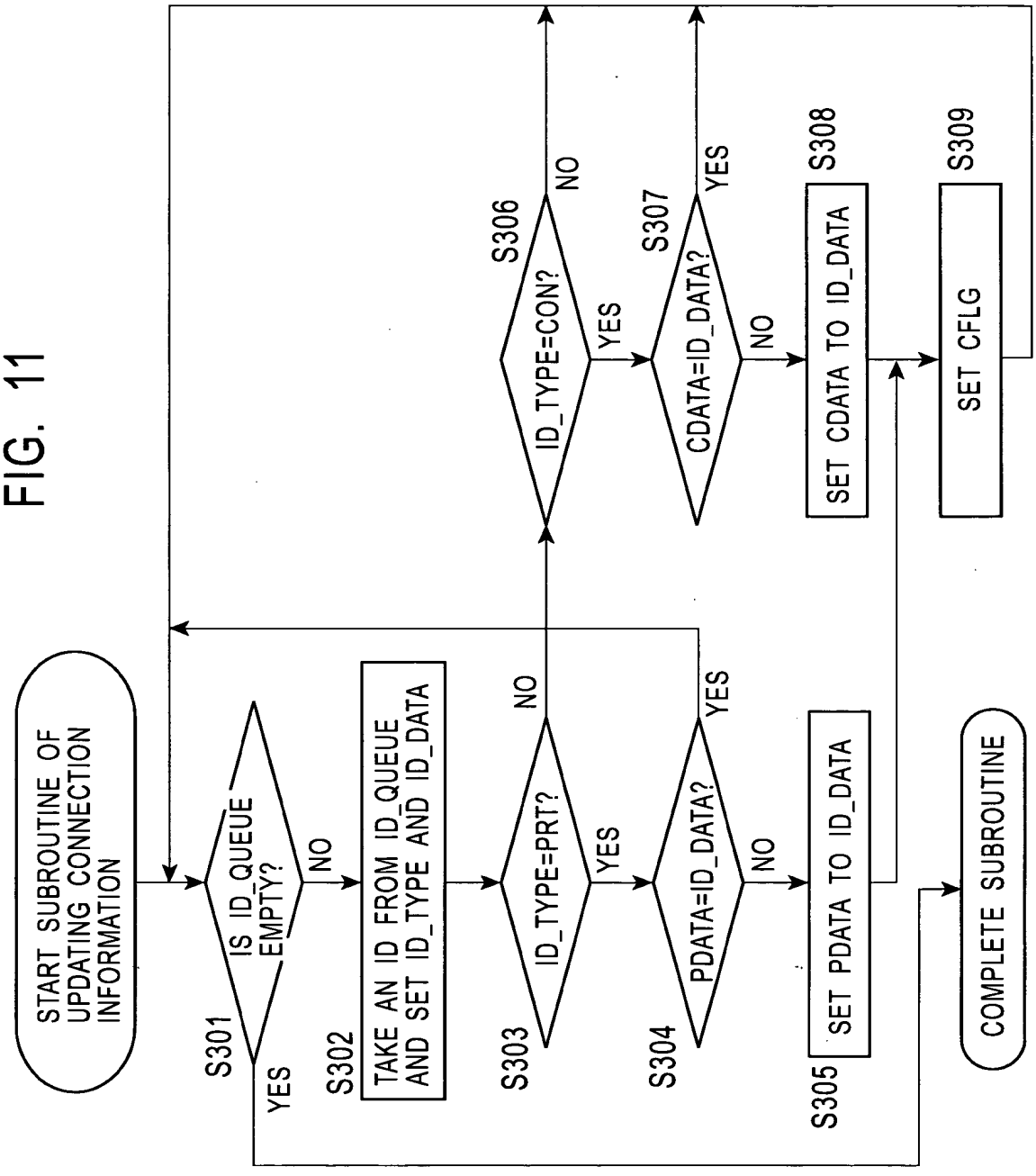

START SUBROUTINE OF UPDATING CONNECTION INFORMATION
S301
IS ID_QUEUE EMPTY?
YES
NO
S302
TAKE AN ID FROM ID_QUEUE AND SET ID_TYPE AND ID_DATA
S303
ID_TYPE=PRT?
NO
YES
S304
PDATA=ID_DATA?
YES
NO
S305
SET PDATA TO ID_DATA
S306
ID_TYPE=CON?
NO
YES
S307
CDATA=ID_DATA?
YES
NO
S308
SET CDATA TO ID_DATA
S309
SET CFLG
COMPLETE SUBROUTINE

FIG. 12

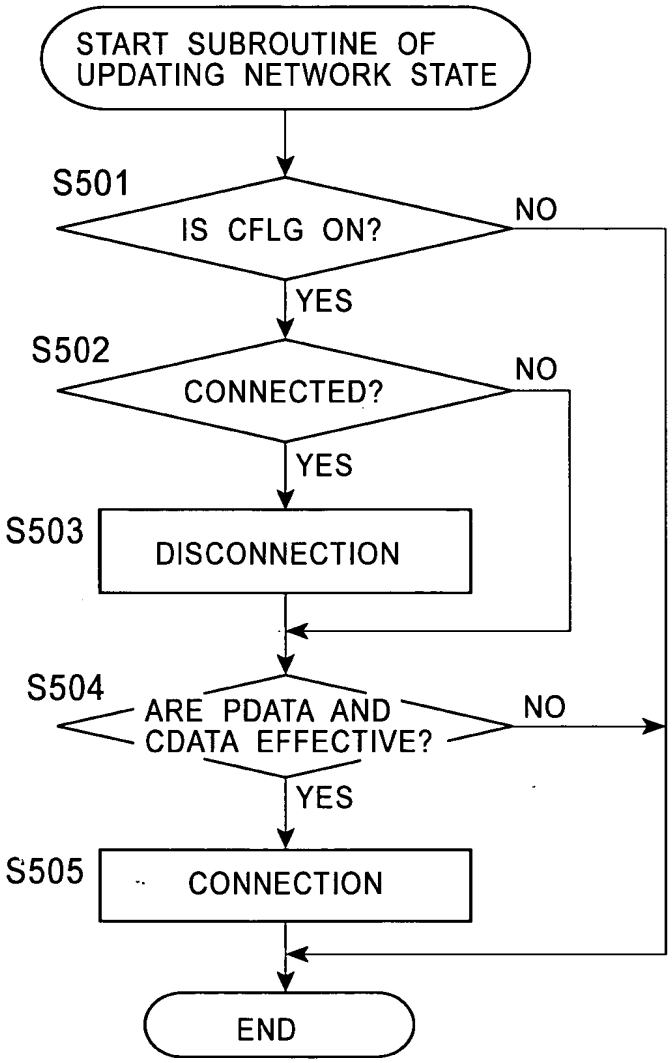

START SUBROUTINE OF UPDATING NETWORK STATE
S501
IS CFLG ON?
NO
YES
S502
CONNECTED?
NO
YES
S503
DISCONNECTION
S504
ARE PDATA AND CDATA EFFECTIVE?
NO
YES
S505
CONNECTION
END

FIG. 13

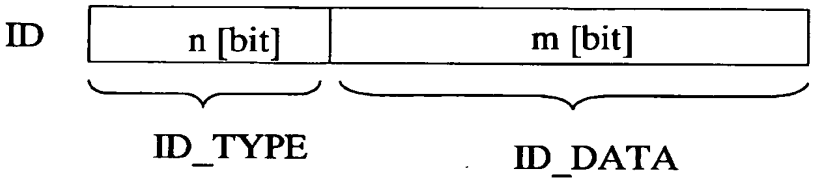


FIG. 14

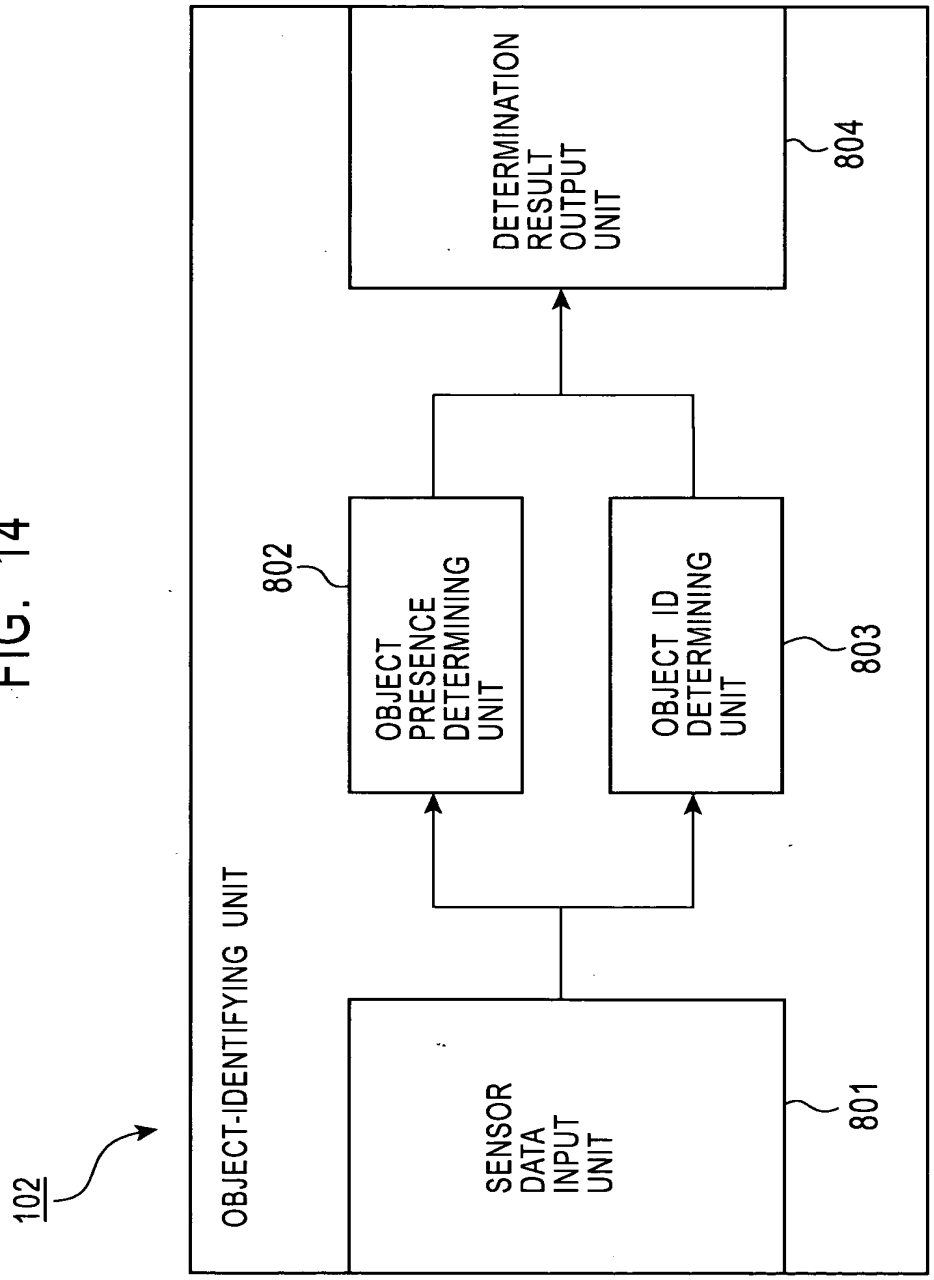

102
OBJECT-IDENTIFYING UNIT
SENSOR DATA INPUT UNIT
801
OBJECT PRESENCE DETERMINING UNIT
802
OBJECT ID DETERMINING UNIT
803
DETERMINATION RESULT OUTPUT UNIT
804

FIG. 15

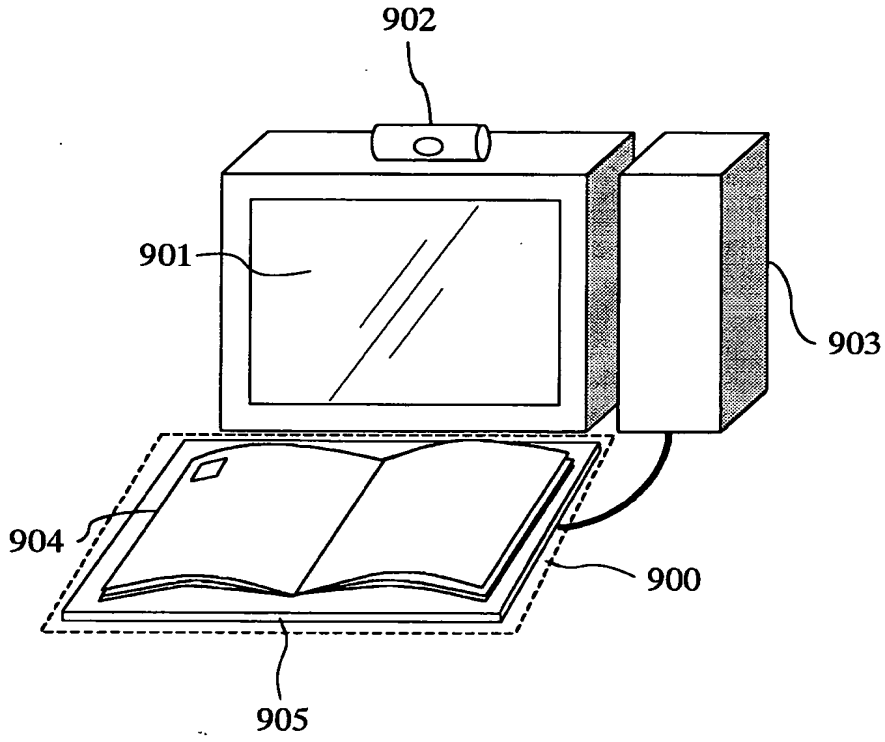


FIG. 16

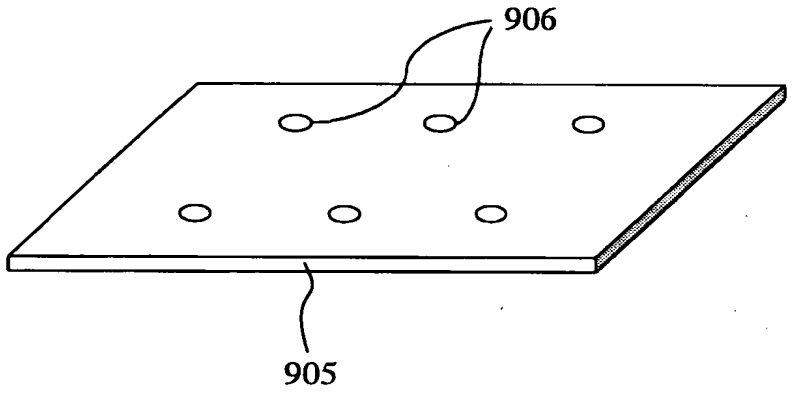


FIG. 17

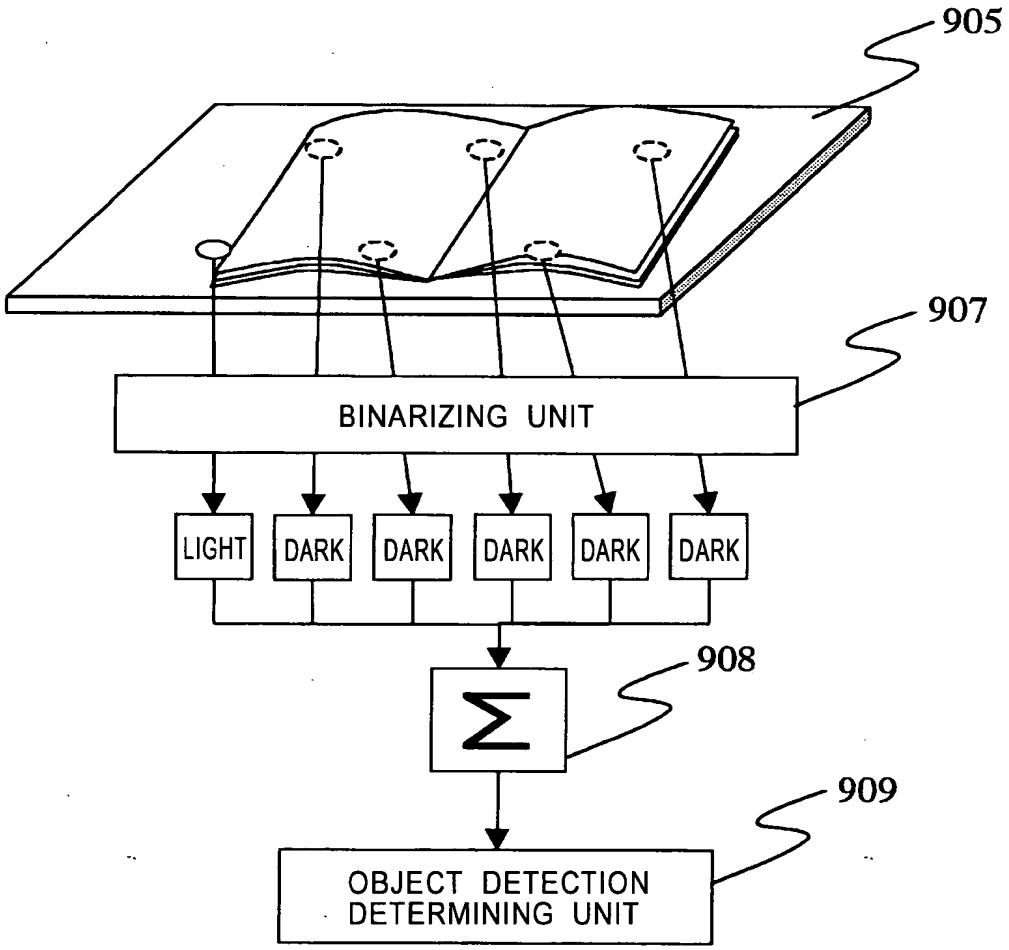

905
907
BINARIZING UNIT
LIGHT
DARK
DARK
DARK
DARK
DARK
908
Σ
909
OBJECT DETECTION
DETERMINING UNIT

FIG. 18

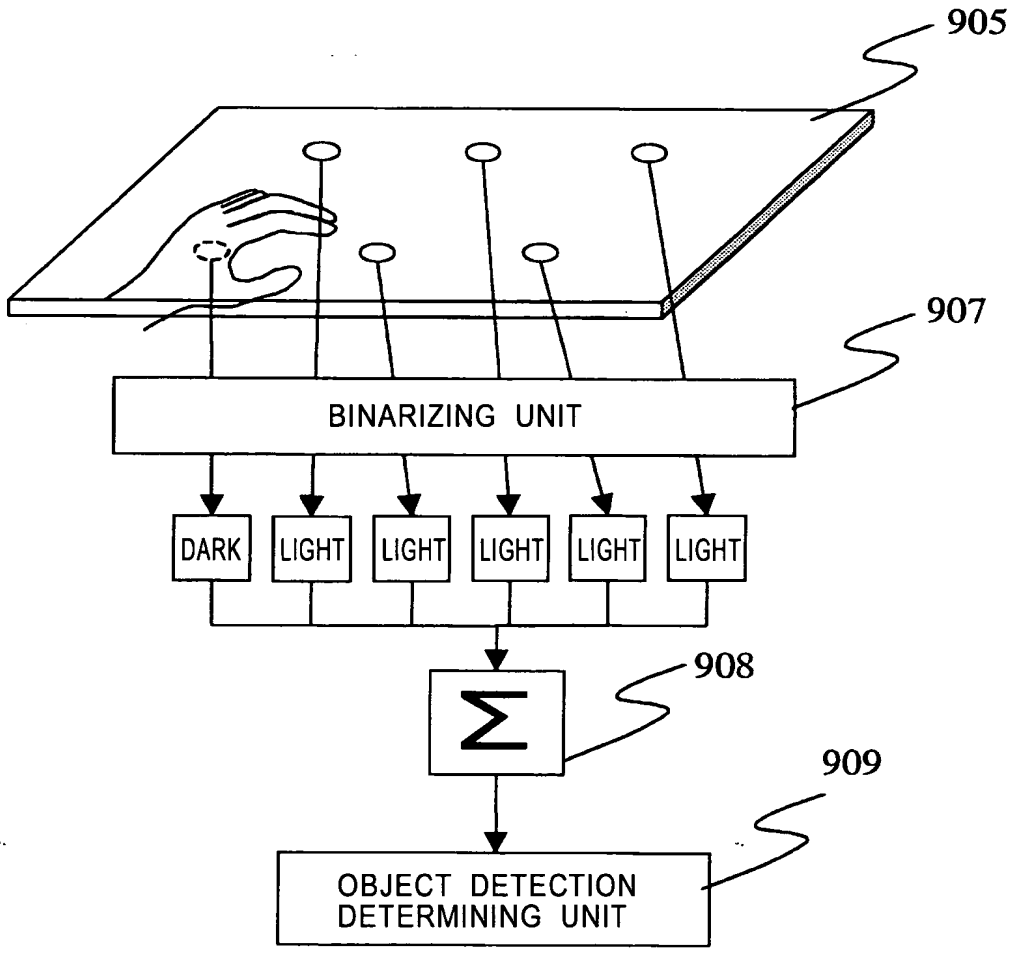

905
907
BINARIZING UNIT
DARK
LIGHT
LIGHT
LIGHT
LIGHT
LIGHT
908
Σ
909
OBJECT DETECTION
DETERMINING UNIT

FIG. 19

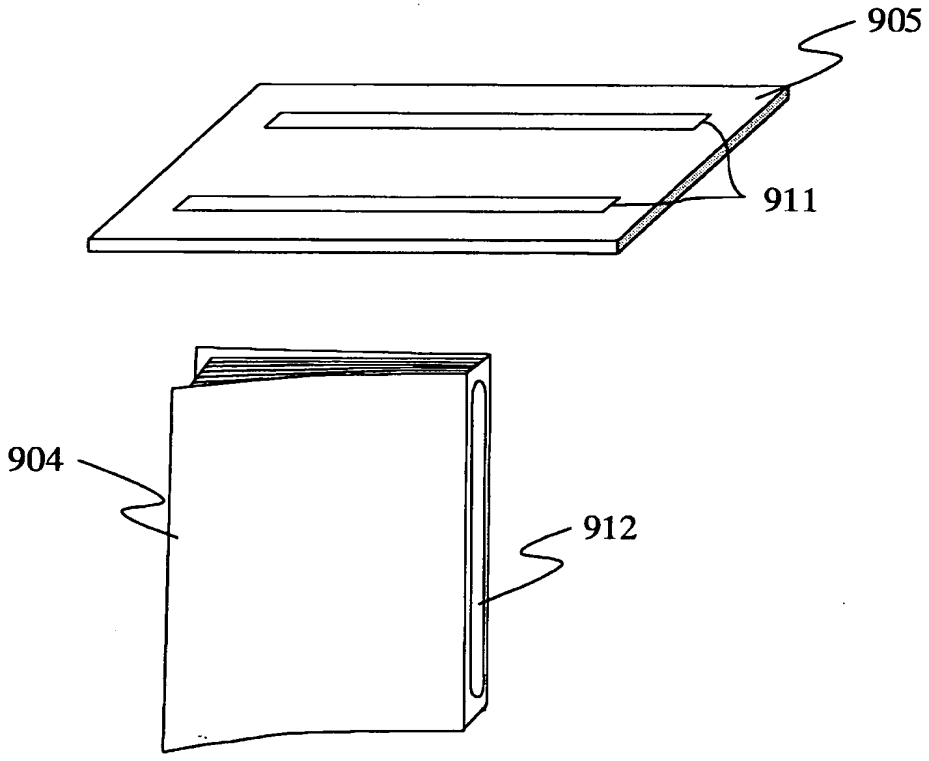


FIG. 20

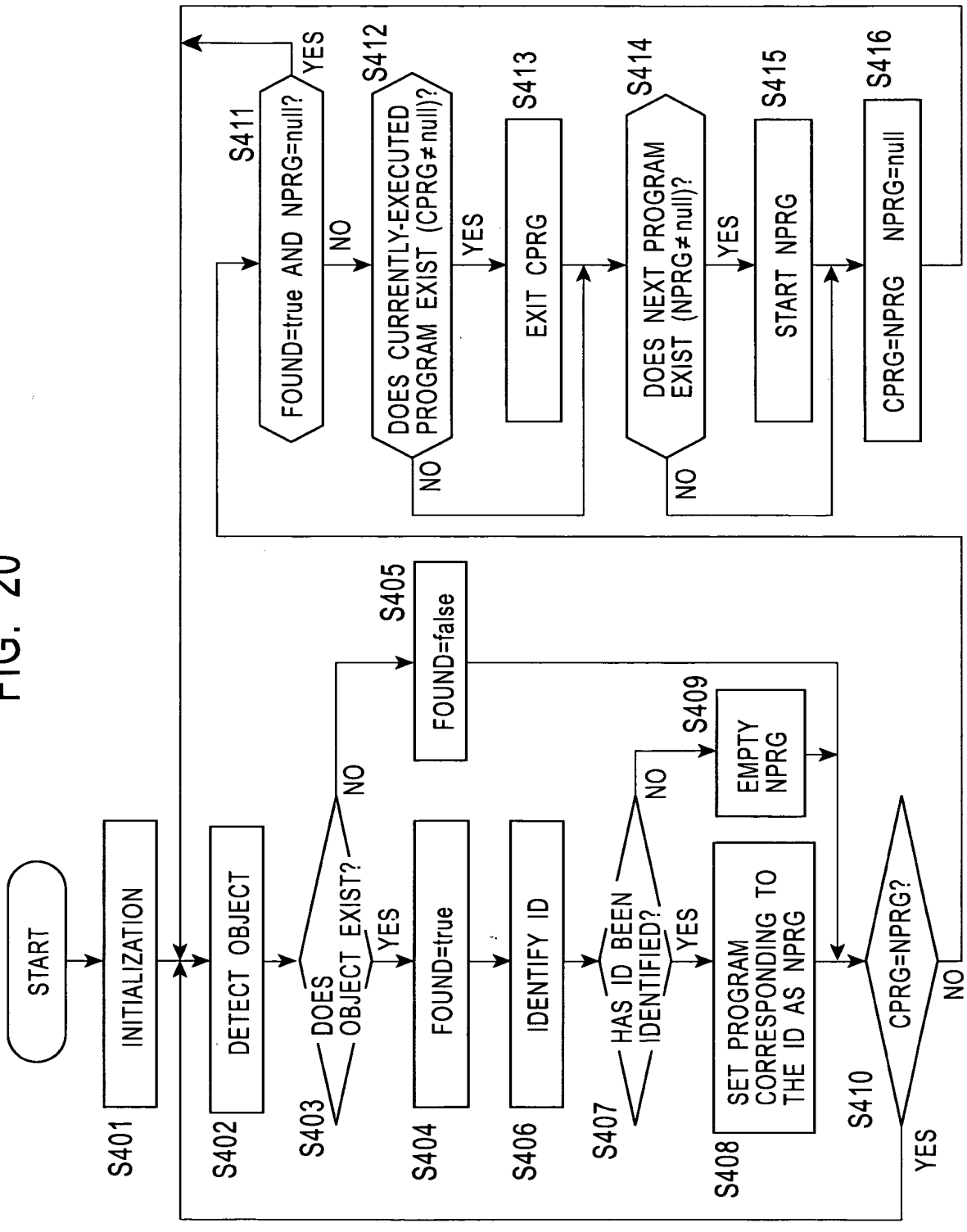
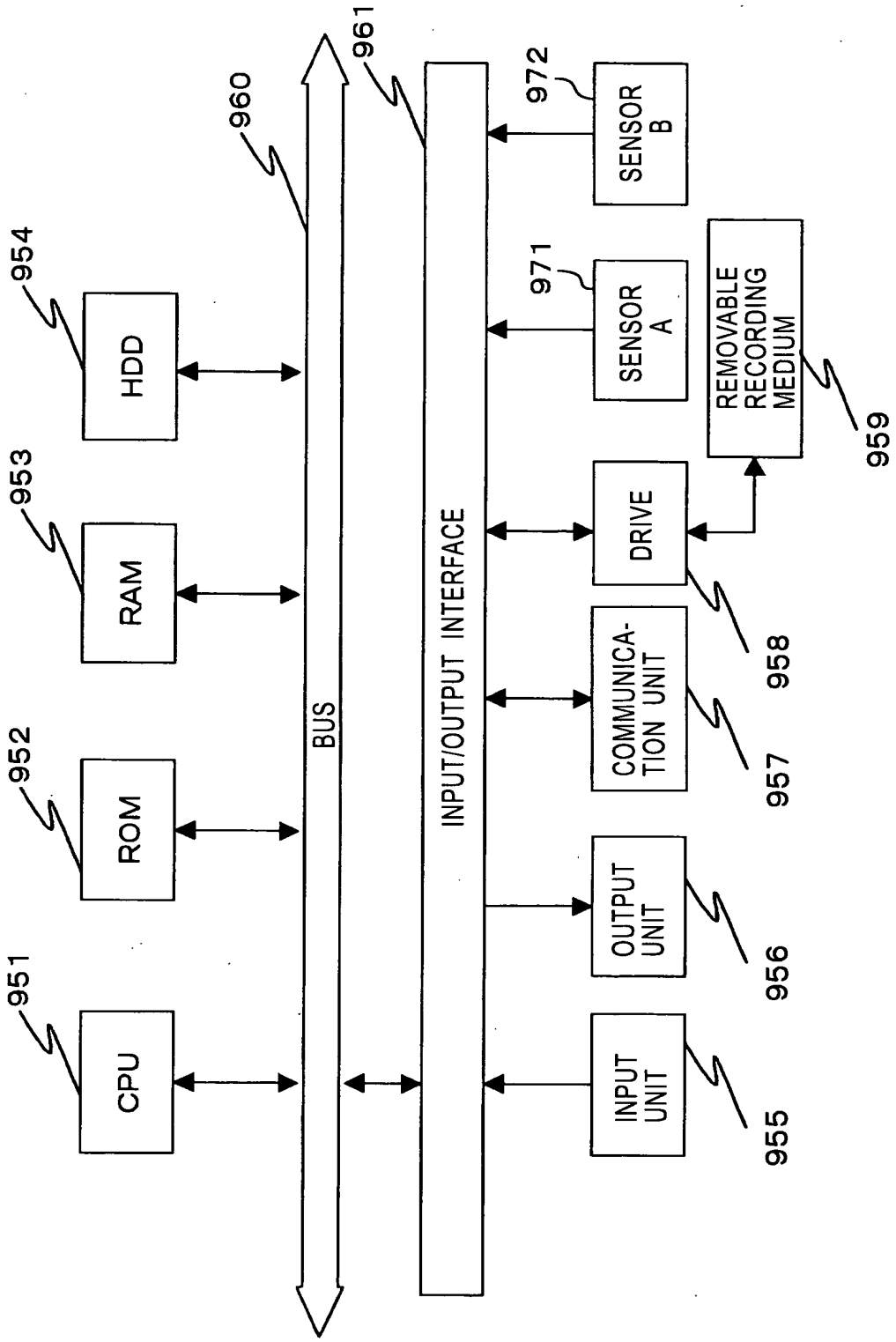

START
INITIALIZATION
S401
DETECT OBJECT
S402
DOES OBJECT EXIST?
S403
NO
YES
FOUND=false
S405
FOUND=true
S404
IDENTIFY ID
S406
HAS ID BEEN IDENTIFIED?
S407
NO
YES
EMPTY NPRG
S409
SET PROGRAM CORRESPONDING TO THE ID AS NPRG
S408
CPRG=NPRG?
S410
NO
YES
FOUND=true AND NPRG=null?
S411
NO
YES
DOES CURRENTLY-EXECUTED PROGRAM EXIST (CPRG≠null)?
S412
NO
YES
EXIT CPRG
S413
DOES NEXT PROGRAM EXIST (NPRG≠null)?
S414
NO
YES
START NPRG
S415
CPRG=NPRG NPRG=null
S416

FIG. 21


951
CPU
952
ROM
953
RAM
954
HDD
960
BUS
961
INPUT/OUTPUT INTERFACE
955
INPUT UNIT
956
OUTPUT UNIT
957
COMMUNICA-TION UNIT
958
DRIVE
959
REMOVABLE RECORDING MEDIUM
971
SENSOR A
972
SENSOR B